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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,934	11/24/2003	Steven Scott Gieseke	758.1111USC1	8328
23552	7590	04/22/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			GREENE, JASON M	
			ART UNIT	PAPER NUMBER

1724

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/721,934	GIESEKE ET AL.	
	Examiner	Art Unit	
	Jason M. Greene	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-32 and 39 is/are allowed.
- 6) ☒ Claim(s) 33-35, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 36 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/24/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claims

1. With regard to claim 21, the Examiner has interpreted the phrase "the central open volume" in lines 12-13 as being the open interior of the extension of media. The phrase "the second end of the media pack" in line 13 has been interpreted as being the end of the media pack adjacent the second end cap.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 33, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binder et al. in view of Patel et al. '363.

With regard to claim 33, Binder et al. discloses a method of servicing an air cleaner comprising removing a filter element (15) from an air cleaner housing, the housing including a body (10) and a removable cover (13), the cover having an inner

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side including a central projection thereon, orienting a new filter element into the air cleaner housing body, the new filter element having a media pack (16), and first (19) and second (20) opposite end caps, the first end cap having a central aperture and the second end cap defining a recess, and orienting the removable cover over an open end of the housing body by extending the central projection on the cover into the recess of the second end cap in Fig. 1 and col. 3, line 14 to col. 4, line 5.

Binder et al. does not disclose the second end cap comprising a composite structure including a pre-form defining a recess, and an annular, molded, ring portion to which the media pack and the pre-form are secured.

Patel et al. '363 discloses a similar filter element having a second end cap comprising a composite structure including a pre-form (36) defining a recess, and an annular, molded, ring portion (24) to which the media pack and the pre-form are secured in Figs. 1-5 and col. 2, line 47 to col. 3, line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the composite end cap structure of Patel et al. into the air cleaner of Binder et al. to provide a reliable connection between the preform and the media pack.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the end cap of Binder as two separable pieces to allow the end cap to be assembled in an infinite number of combinations to allow the end cap to be custom manufactured for a specific application.

With regard to claim 35, Patel et al. '363 discloses the step of orienting the new filter element including orienting the new filter element wherein the second end cap comprising a composite structure including the pre-form with the recess and the annular, molded, ring portion to which the media pack and the pre-form are secured, the pre-form having a circular wall (40) surrounded by the media pack, and a recessed central base, the annular, molded, ring portion (24) defining a portion of an outer end surface of the second end cap, and the second end cap resulting from positioning the media pack around the circular wall of the pre-form and then potting the resultant combination of pre-form and media pack into moldable polymer such that a portion of the moldable polymer, upon molding, defines a portion of an outer surface of the second end cap in Figs. 1-5 and col. 2, line 47 to col. 3, line 3.

With regard to claim 37, Binder et al. discloses the step of orienting a new filter element into the air cleaner housing body including forming a radial seal between the first end cap and the air cleaner housing body in Fig. 1 and col. 3, lines 31-34.

4. Claims 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binder et al. and Patel et al. '363 as applied to claim 33 above, and further in view of Brown et al. '466.

Binder et al. and Patel et al. '363 do not disclose the step of removing a filter element including removing the filter element from a position mounted over a safety filter element, the step of positioning a new filter element comprising a step of

positioning the second filter element over the first safety element, or after the step of removing the filter element, removing a safety filter element from the air cleaner housing and then installing a new safety filter element in the air cleaner housing.

Brown et al. '466 discloses a similar air cleaner comprising a safety filter element (31) mounted in an interior of a primary filter element (30) in Figs. 1 and 13.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the safety filter element of Brown et al. '466 into the air cleaner of Binder et al. and Patel et al. to prevent material bypassing the primary filter from reaching the device being protected, as is well known in the art. Furthermore, it would be obvious to one of ordinary skill in the art to replace the safety filter element at appropriate intervals.

Allowable Subject Matter

5. Claims 21-32 and 39 are allowed.
6. Claim 36 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:

With regards to claims 21-32, Binder et al. discloses a method of servicing an air cleaner comprising the steps of removing a removable service cover (13) from an air cleaner housing (10) to expose an open end and a first serviceable filter element (15), the first serviceable filter element comprising an extension of media (16), surrounding an open interior, extending between first (19) and second (20) end caps, the first end cap having a central air flow aperture therein in fluid flow communication with the open filter interior, the second end cap comprising an apertured (to accommodate the threaded stud 21) recess projecting into the central open volume from the second end of the media pack, the first serviceable filter element being positioned with the second end cap directed toward the access opening provided by the step of removing the removable service cover, removing the first serviceable filter element from the air cleaner housing by drawing the serviceable filter element outwardly from the housing, by passage through the open end provided by the step of removing the access cover, positioning a second serviceable filter element within the air cleaner housing by passage through the open end, wherein the second serviceable filter element has the same construction as the first serviceable filter element, and mounting the service cover with a non-circular (conical) projection on the service cover projecting into the recess in the second end cap of the second serviceable filter element in Fig. 1 and col. 3, line 14 to col. 4, line 5.

The prior art made of record does not teach or fairly suggest the method of claim 21 wherein the first and second serviceable filter elements comprise second end caps

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having no apertures therethrough and comprise closed recesses projecting into the central open volume. Since the second end caps of Binder et al. are apertured to accommodate the threaded stud 21 to secure the cover (13) to the housing (10), there is no motivation to produce the second end cap of Binder et al. without the aperture.

With regard to claim 36, The prior art made of record does not teach or fairly suggest the method of claim 33 wherein the step of orienting the removable cover over an open end of the housing body by extending the central projection on the cover into the recess of the pre-form includes orienting a cover having a non-circular projection with at least vertices projecting into the recessed central base of the pre-form in the second end cap.

With regard to claim 39, Binder et al. discloses a method of installing a filter element into an air cleaner comprising providing a filter element (15) having a media pack (16) defining an open volume, a first end cap (19), and an opposite second end cap (20), the second end cap having an apertured recess projecting into the volume, and orienting an access cover (13) having an inner side with a non-circular central projection thereon over the filter element by extending the central projection into the recess to support the filter element in Fig. 1 and col. 3, line 14 to col. 4, line 5.

The prior art made of record does not teach or fairly suggest the method of claim 39 wherein the second end cap is a closed end cap with no aperture therethrough and includes a closed recess projecting into the open volume. Since the second end caps of

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Binder et al. are apertured to accommodate the threaded stud 21 to secure the cover (13) to the housing (10), there is no motivation to produce the second end cap pf Binder et al. without the aperture.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jason M. Greene
Examiner
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jmg
April 16, 2004

PRIMARY EXAMINER
JAMES SMITH
PRIMARY EXAMINER


4-19-04